

Jeffrey Durieux, MSc

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Summary

Highly ambitious and motivated young researcher in the field of methodology and statistics for neuroimaging data. My research interests are developing data driven (unsupervised) machine learning algorithms for exploring latent (unobserved) variables related to complex human behavior and brain pathologies such as Alzheimer's disease. Another related research interest is to program easy to use software such that other researchers can apply and benefit from state of the art (computationally demanding) statistical methods.

Skills & Abilities

- Statistics
- Machine learning
- Cluster Analysis
- Statistical consultancy
- Quantitative research

Programming/ tools

- R (proficient/ daily usage)
- SPSS (proficient)
- Python (proficient)
- Matlab (beginner level)

Experience

PhD candidate Methodology and Statistics Unit Leiden University – Sep 2016 - Present

- Research (0.8 fte): Clusterwise Independent Component Analysis: a novel unsupervised machine learning method for automatically grouping subjects based on underlying functional connectivity patterns obtained with resting-state functional Magnetic Resonance Imaging (fMRI) data
- Teaching (0.1 fte): Mathematics course Leiden University Institute of Psychology (entry level course that students need to pass in order to apply for the bachelor program Psychology at Leiden University), 2nd year bachelor courses and teaching bachelor students the R-programming language.
- Consultancy (0.1 fte): Statistical/Research consultant at the faculty of Social and Behavioral Sciences at Leiden University

Education and Research Employee – Methodology and Statistics Unit Leiden University. Sep 2015 – Aug 2016

	<ul style="list-style-type: none"> ▪ Consultancy: Statistical/Research consultant at the faculty of Social and Behavioral Sciences at Leiden University ▪ Researcher: unsupervised machine learning for neuroimaging data ▪ Bachelor Thesis Project Tutor
Education	<p>Leiden University – Master of Science Methodology and Statistics in Psychology 01-Sep-2014 – 31-Aug-2015 Graduated Cum Laude Master thesis grade: 9 (out of 10)</p> <p>Leiden University – Bachelor of Science Psychology 01-Sep-2010 – 31-Aug-2013 Graduated Cum Laude Honours Research Bachelor Project/Thesis grade: perfect 10 (out of 10) Minor project Brain and Cognition grade: perfect 10 (out of 10)</p> <p>Leiden University – Honours degree 01-Jan-2011 – 31-Aug-2013 <i>A prestigious extracurricular program at Leiden University (30 ECTS)</i></p> <p>University Leiden/ Leiden University Medical Center Honours Class Metabolic Disorder <i>01-sep-2012 – 31-Aug- 2013</i></p>
Awards/Grants	<p>The Netherlands Organization for Scientific Research (NWO) Talent Grant <i>Fully four-year funded PhD position</i></p>
Scientific publications	<ul style="list-style-type: none"> ▪ Durieux, J. & Wilderjans, T. F. (2019). Partitioning subjects based on high-dimensional fMRI data: Comparison of several clustering methods and studying the influence of ICA data reduction in big data. <i>Behaviormetrika, 46</i>, 271-311. ▪ Farnham A., Kurz C., Oeztuerk M.A., Solbiati M., Myllyntaus O., Meekes J., Pham T.M., Paz C., Langiewicz M., Andrews S., Kanninen L., Agbemabiese C., Guler A.T., Durieux J., Jasim S., Viessmann O., Frattini S., Yembergenova D., Benito C.M., Porte M., Grangeray-Vilmint A., Curiel R.P., Rehncrona C., Malas T., Esposito F. & Hettne K. (2017), Early career researchers want Open Science, <i>Genome Biology</i> 18: e221. ▪ Kowal M., Van Steenbergen H., Colzato L.S., Hazekamp A., Van der Wee N., Manai M., Durieux J. & Hommel B. (2015), Dose-dependent effects of cannabis on the neural correlates of error monitoring in frequent cannabis users, <i>European Neuropsychopharmacology</i> 25(11): 1943-1953.

- Kowal M., Hazekamp A., Colzato L.S., Van Steenbergen H., Van der Wee N., **Durieux J.**, Manai M. & Hommel B. (2015), Cannabis and creativity: Highly potent cannabis impairs divergent thinking in regular cannabis users, *232(6)*: 1123-1134.
- Sellaro R., Guroglu B., Nitsche M.A., Van den Wildenberg W.P.M., Massaro V., **Durieux J.**, Hommel B. & Colzato L.S. (2015), Increasing the role of belief information in moral judgments by stimulating the right temporoparietal junction, *Neuropsychologia*77: 400-408.

Presentations

- Durieux, J., & Wilderjans, T. F. (2020, June). Detecting Disease Subtypes by Means of Clusterwise Independent Component Analysis. Online presentation presented at the International Meeting of Psychometric Society (IMPS), July 13-17, Link to video: www.jeffreydurieux.com/videos/
- **Durieux, J.**, Wilderjans, T. F., Koini, M., de Vos, F., Schouten, T. M., Lechner, A., Schmidt, R., & Rombouts, S. A. R. B. (2019, July). Cluster Independent Component Analysis for analyzing multi-subject resting state fMRI data. Poster presented at the Neurohackademy Summer School, July 27- August 7, Seattle, USA.
- **Durieux, J.**, Wilderjans, T. F., Koini, M., de Vos, F., Schouten, T. M., Lechner, A., Schmidt, R., & Rombouts, S. A. R. B. (2019, June). Cluster Independent Component Analysis for analyzing multi-subject resting state fMRI data. Poster presented at the Organization for Human Brain Mapping (OHBM), June 9-13, Rome.
- **Durieux, J.**, Rombouts, S. A. R. B., & Wilderjans, T. F. (2019, April). Detecting disease subtypes by means of Clusterwise Independent Component Analysis. Paper presented at the 8th Dutch-Flemish Classification Society Conference (VOC 2017), April 5th, Groningen, The Netherlands (presenter: J. Durieux)
- **Durieux, J.**, Wilderjans, T. F., & Rombouts, S. A. R. B. (2018, august). Cluster Independent Component Analysis for analyzing multi-subject resting state fMRI data. Paper presented at the 5th European Conference on Data Analysis (ECDA 2018), July 4-6, Paderborn, Germany (presenter: J. Durieux)
- **Durieux, J.**, Wilderjans, T. F., & Rombouts, S. A. R. B. (2018, June). Cluster Independent Component Analysis for analyzing multi-subject resting state fMRI data. Poster presented at the 8th International Workshop on

	<p>Pattern Recognition in Neuroimaging (PRNI), June 12-14, Singapore.</p> <ul style="list-style-type: none"> ▪ Durieux, J., Wilderjans, T. F., & Rombouts, S. A. R. B. (2017, September). Cluster Independent Component Analysis for analyzing multi-subject resting state fMRI data. Poster presented at the official opening of the Leiden Institute for Brain and Cognition scanner (LIBC 2017), September 29th, Leiden, The Netherlands. ▪ Durieux, J., Wilderjans, T. F., & Rombouts, S. A. R. B. (2017, December). Cluster Independent Component Analysis for analyzing multi-subject resting state fMRI data. Poster presented at the 27th Conference of the Interuniversity graduate school of Psychometrics and Sociometrics (IOPS 2017), December 14-15, Tilburg, The Netherlands. ▪ Durieux, J., Wilderjans, T. F., & Rombouts, S. A. R. B. (2017, august). Cluster Independent Component Analysis for analyzing multi-subject resting state fMRI data. Paper presented at the 15th biennial Conference of the International Federation of Classification Societies (IFCS 2017), August 8-10, Tokyo, Japan (presenter: J. Durieux) ▪ Durieux, J., Wilderjans, T. F., & Rombouts, S. A. R. B. (2017, May). Cluster Independent Component Analysis for analyzing multi-subject resting state fMRI data. Paper presented at the 6th Dutch-Flemish Classification Society Conference (VOC 2017), May 19th, Leiden, The Netherlands (presenter: J. Durieux)
<p>International Summer School/ Training</p>	<ul style="list-style-type: none"> ▪ Neurohackademy Summer School, Organized by the University of Washington eScience Institute, July 27-August 7, Seattle, USA. ▪ 1st International Summer School on Classification and Data Analysis. Organized by the Classification group of the Italian Statistical Society (CLADAG). University of Bologna, campus Rimini, Italy. Date: 22-May-2017 – 26-May-2017 ▪ 7th LERU Doctoral Summer School on Data Stewardship for Scientific Discovery and Innovation. Organized by the League of European Research Universities (LERU). Location: Leiden University Medical Center, Leiden, The Netherlands. Date: 10-July-2016 – 15-July-2016
<p>Leadership</p>	<p>Student representative (September 2014 – August 2015) <i>Student representative for the master program Methodology and Statistics in Psychology at Leiden University</i></p>
<p>References</p>	<p>Dr. Tom F. Wilderjans Associate Professor at Leiden University t.f.wilderjans@fsw.leidenuniv.nl</p>